

Biological Sciences

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The System of Organization and Management of Health Care Treatment Effectiveness in Patients

with COPD in Chelyabinsk

Keywords: chronic obstructive pulmonary disease; effectiveness of treatment; specialized medical care.

Abstract: This study describes the effectiveness of the developed and implemented models for organizing primary specialized medical care for patients with chronic obstructive pulmonary disease in conditions of a big city.

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Pedagogy and Psychology

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The System of Training Students of Physical Culture University to Mastering Recreational Activities

Keywords: professional competence; recreational activities; training system; students.

Abstract: This article describes the content of the system of training students of physical culture university to mastering recreational activities.

page 11-14

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Teaching Methods in Pre-School Institutions of Finland

Keywords: preschool institutions; education; Finnish experience.

Abstract: The paper describes the methods of instruction in pre-school institutions of Finland. It is shown that a child has an inherent need in daily interaction and communication with adults and parents, the need to plan and develop kindergartens so that they could motivate children to have conversations; the recommendations of the Finnish specialists engaged in preschool education have been considered.

page 15-18

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The Influence of Beliefs in Organizational Culture upon Managerial Decisions

Keywords: strategies to reduce uncertainty; values; orientation; socio-economic environment; organizational culture.

Abstract: The aim of the research is to identify the differences in the means to reduce uncertainty used by the leaders of government and commercial organizations. The significant differences were identified between two groups of owners: representatives of commercial sector are more tolerant towards uncertainty; they demonstrate reflexivity instead of impulsivity in their behavior and are more disposed to cooperation than to individualism. These differences point to the fact that the owners of commercial organizations use more effective strategies of reducing uncertainty.

page 19-21

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The Criterion, Indicators and Formedness Levels of Epistemological Component of Professional Training of Technical University Students Studying Natural Sciences

Keywords: epistemological component; criterion; measure; completeness and quality of material learning; levels of component formedness; speed of test completion.

Abstract: This article describes the experimental work aimed to define the criterion, indicators and levels of epistemological component formedness of professional training of technical university students studying natural sciences. The main focus was aimed at the epistemological component formation of professional training of technical university students.

page 22-27

A.V. Nikolaeva

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On the Problem of Tutoring at the Present Stage of Development of Education

Keywords: individualization; individual educational program; educational environment; tutor; tutor support.

Abstract: The article considers the historical background of tutoring in the Russian and international contexts; the author discloses the purpose, objectives and basic concepts of tutor support. Advanced scientists and researchers proposed to distinguish the position and profession of a tutor. After approving professional qualifying groups of positions in education, including that of a tutor, managers of educational institutions have real opportunities to introduce this teaching position. The article analyzes open educational technologies that allow tutors to solve the tasks more efficiently.

page 28-30

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The Technique of Perfection of Balance and Turns in Children Aged 7–9 years in Sports Aerobics

Keywords: vestibular apparatus; beginner training; balance; turns; special exercises; technical readiness; training devices.

Abstract: Methods of improving coordination movements were developed including a series of exercises with the use of training equipment aimed at improving balance and turns for beginner training level in sport aerobics.

page 31-34

History, Philosophy and Sociology

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Russian-Chinese Relations in the Field of Culture and Education in Chinese Historiography

Keywords: Russian-Chinese relations; relations in the field of culture and education; Chinese historiography; history of China; humanitarian relations; international relations.

Abstract: The article gives an overview of works by Chinese scholars on Russian-Chinese relations in the field of culture and education since 1949. In addition, the main studies on the stated theme were analyzed in terms of the international political situation and, correspondingly, the key issues and challenges facing society in different historical periods.

page 35-38

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Historical Stages of Formation of the Samara Region Borders

Keywords: administrative, territorial boundaries; administrative division; county; province; territory; region.

Abstract: This article analyzes the historical stages of the formation of the administrative-territorial boundaries of the Samara region. The author considered temporary periods of education and changes in the boundaries of administrative division of subjects of the Russian Federation of the Middle Volga. There are four administrative units as basic in the evolutionary development: Samara district 1780 -1851, Samara Province 1851 -1928, Middle Volga region 1928 -1936, Kuibyshev region 1936 -1991.

page 39-41

Mathematical Methods and Models

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Financial Markets Forecasting Using Artificial Neural Networks

Keywords: dynamic models; currency rates; mathematical modeling; neural networks; forecasting.

Abstract: The paper studied the neural networks applicability for financial markets forecasting and possibility of dynamic share prices modeling. Methods for forecasting accuracy to be increased were found. The algorithm of dynamic artificial neural networks was written using C#. Mathematical models for solving approximation and classification tasks were created. The obtained results showed the applicability of neural networks for financial markets forecasting.

page 42-46

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Guaranteed Estimations of Desired Parameters in the Problem of Identification of Mathematical Models of Real Objects

Keywords: guaranteed estimations; problem of identification; mathematical models of real objects; information set.

page 47-52

Abstract: Guaranteed estimations of parameters in the problem of identification is given by information set Ω_0 of such ω , satisfying the inequality $\varphi(\omega) \leq \varepsilon$, where $\varphi(\omega) = \min_{\substack{v: \|y - P(v)\| \leq \varepsilon_1 \\ x: \|z - Q(x)\| \leq \varepsilon_2}} \|\bar{F}(x, v, \omega)\|$, ε is the model of the object and $y = P(\bar{v}) + \xi$, $z = Q(\bar{x}) + \eta$ is the measurement of input and output of the object.

L.M. Oniskiv

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Method of Calculating Reliability of Commercial Banks

Keywords: mathematical model; reliability; commercial bank; capital.

page 53-56

Abstract: In this paper, a mathematical model of bank reliability is formed based on the basic parameters determining the liquidity of commercial bank. Based on the statistical data for the year 2010 and using the proposed methodology for evaluating the reliability of 10 banks Perm region has been assessed.

T.A. Osechkina, E.V. Semenova

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Optimal Control of Price and Marketing Efforts in a New-Product Adoption Model

Keywords: optimal control; algorithm for Hamilton-Jacobi-Bellman equation; Sethi model; marketing costs; durable goods; share of goods in the market.

page 57-61

Abstract: We consider the problem of optimal control of marketing efforts for maximum profit, found by the algorithm of the Hamilton-Jacobi-Bellman partial solutions for different sets of constants.

T.F. Pepelyaeva, V. Yu. Ivankin

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Method of Forming Competences in the Development of Independent Educational Standard

Keywords: general cultural competence; independent educational standard; Bologna Process; basic education program.

page 62-64

Abstract: The article proposes a classification of general cultural competencies to develop independent sets of educational standards. The given approach optimizes the educational process in university with a great number of different education programs.

G.A. Pushkarev, N.N. Likhacheva, E.Yu. Vorobeva

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The Solvability of the Boundary Problem for the Differential Equation with the Deviation of the Argument

Keywords: functional-differential equation; boundary value problem.

Annotation: The paper considers the problem of solvability of a nonlinear boundary value problem $(\Delta x)(t) = f\left(t, \int_a^b x(s) d_s R_0(t, s)\right)$, $t \in [a, b]$, $x(a) = \alpha$, $x(b) = \beta$ in assumptions: operator $\Delta: W^2 \rightarrow L$ defined by equality $(\Delta x)(t) = x''(t) + \int_a^b x(s) d_s R_1(t, s)$, functions $R_1: [a, b] \times [a, b] \rightarrow R^1$ and $R_0: [a, b] \times [a, b] \rightarrow R^1$ are measurable in the square $[a, b] \times [a, b]$; $f: [a, b] \times R^1 \rightarrow R^1$ function satisfies the conditions of the Caratheodory spaces: $f(t, u)$ measurable in t at all u and is continuous u for almost all $t \in [a, b]$. The method of monotone operators is used.

page 65-69

M.A. Sevodin

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On One Approach to Production Cost Equalization Adjustment

Keywords: cost equalization; one-oneness; reflection; differentiation operators.

page 70-72

Abstract: This paper investigates the problem of production cost equalization in different

countries participating in world trade. The author considered one of the key conditions for adjustment, namely, one-oneness of function costs. It is proposed to apply continuation method directly in the nonnegative orthant to obtain criteria of one-oneness. The two of such criteria were defined in the study.

V.A. Sokolov, R.V. Gubaydullina

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On Impulse Control Problem for Assets Dynamics Model in Two-Industry Economy

Keywords: impulse control; dynamics model; Fredholm integral equation; piecewise constant delay; W-substitution.

page 73-78

Abstract: The paper considered impulse control for the assets dynamics model in a two-industry economy (the case of independent sectors). The desired impulse management was created.

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To the Question of Business Planning

Keywords: business plan; econometric model.

page 79-84

Abstract: The given method of business planning utilizes one of the methods of econometrics in assessing the capacity and power of the market and the construction of parts shortages trend in the market; indicators of economic efficiency: breakeven point, payback period, profitability have been calculated.

I.R. Shegelman, P.V. Budnik, V.N. Baklagin, A.V. Demchuk

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Simulation of Round Log Production Process for Wooden Housing Construction

page 85-88

Keywords: cylindering; technological line; wooden construction; wood waste; simulation.

Annotation: The paper describes a simulation model of round log production process for wooden housing construction.

Computer Science

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Intellectual-Analytical System for Market Environment on Electronic Trading Platforms and Management Decision Support

page 89-93

Keywords: alliance; market environment analysis; intellectual-analytical system; electronic trading platform; managerial decision-making in electronic market conditions.

Abstract: This paper presents an analytical-intellectual system to analyze market environment for electronic trading platforms designed to support management decision-making in conditions of electronic markets.

P.S. Titaev

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Ways of Improving Information System for Monitoring Fire Situations in the Tver Region

page 94-100

Keywords: information system; video monitoring; data processing.

Abstract: The paper considers the main objectives of improving information systems for early detection of seats of fire in forests.

Ecology and Nature Management

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Optimum Operating Conditions of Through Processes of Logging Operations

Keywords: logging operation; optimization; logging residues.

page 101-103

Abstract: The paper studies logging operations aimed at total utilization of wood biomass. The author described the research methodology and the results of simulation model work. The values of the objective function for machine systems based on feller buncher, skidder and forestry processor reach 1.595, those for systems based on machine harvester and forwarder are 1.556 and for the other systems they are less than 1.0. It is recommended to use the above-mentioned systems of machines for parallel harvesting of timber and logging residues.

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Autorecycling: Prospects and Problems of Implementation

Keywords: autorecycling; recycling; environmental issues.

Abstract: One of the ways to reduce the burden on the environment, reduce energy and material production is the disposal of used vehicles, machinery, household goods. Within this framework, disposal of old cars is developed.

page 104-108

Economic Sciences

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Development of Rescheduling Algorithm for Production Process in Crisis Conditions

Keywords: strategic enterprise management; stability analysis.

Abstract: This paper discusses the development process of rescheduling stages of the production process in the face of uncertainty. For the analysis of parametric stability of the production process the author defined margins deviations in the performance parameters of the production process and the possibility of returning to the production process as planned after disturbance.

page 109-113

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Modeling of Value Stream Mapping at Industrial Enterprise OOO "TMS-TruboprovodServis"

Keywords: lean production; value stream mapping; waste; efficiency.

Abstract: The effects of the application of value stream mapping on the efficiency of the industrial company performance. The author conducted the search and the study of the loss of time during the production of a pipe. The author proposed some measures to improve the production process based on lean production tools, and calculated their efficiency. The key steps for value stream manager were formulated.

page 114-119

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Work Experience and Its Impact on Graduates' Career Development

Keywords: graduate; higher education; vocational education; incomplete higher education; career; job search; work experience; HR management; recruitment; employment; labor market.

Abstract: The main purpose of this article is to evaluate how work experience of graduates influences their further career. The issue of career choice of school-leavers is discussed. The author reflects on the role of university degree on the career prospects in company. The attitude of businesses to non-experienced candidates without higher education or vice versa has been discussed.

page 120-122

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Effective Management of Tax Risks in Small Business

Keywords: tax burden; tax risk; tax benefit; financial risk.

Abstract: The paper analyzes tax risks. The authors study the ways of optimum performance of the organization and the policy directed on the effective management of tax risks in small business.

page 123-125

E.A. Nikitina

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The Use of Scoring Models When Issuing Micro-Loans through Internet Project

Keywords: scoring models; reference portfolio; micro-loans.

Abstract: The author describes the developed scoring model of the Internet project, which specializes on granting of micro-loans. The stages of building the scoring model have been specified.

page 126-128

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Improvement of Traditional Methods to Assess the Investment Efficiency Considering the Specifics of Start-Ups

Keywords: start-up; modified NPV; discount rate for a start-up; capacity factor.

Abstract: The article is devoted to the problems of investment planning, when the object of research is a start-up type of investment project. The authors summarize the practice of evaluating the effectiveness of investments in innovations considering the specifics of start-ups and improve the traditional methodology for calculating the NPV.

page 129-134

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Algorithm for Evaluating the Efficiency of Small University-Based Innovative Enterprises

Keywords: university; university y innovation potential; small innovative enterprise; evaluation indicators of university innovation potential.

Abstract: The paper deals with the evaluation of the efficiency of small university-based innovation enterprises. The authors offer their treatment of the concept “small university-based innovative enterprise” . An algorithm for evaluating the efficiency of small university-based innovative enterprises is presented. A set of indicators for the evaluation of the innovation potential of the university, which is a measure of the innovation condition both as a whole and for separate directions, is proposed.

page 135-140

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Customer-Oriented Approach to Brand Management in Retail Network

Keywords: brand; customer-oriented approach; retailer; loyalty.

Abstract: In customer-oriented approach to brand management in the retail sector, it is important to remember that brand is based on values inherent to it. Consequently, the task of branding is to fixate certain values for a particular company and create a strong emotional connection.

page 141-143

Legal Science

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Technological Innovations: Source of Evolution of the State and Law

Keywords: civil law; technologies; modernization; information; society.

Abstract: This article deals with the development of law, society and government of Russia in the next decade; attention is given to studying scientific and technical potential of developed countries, the use of ICT in the organization of civil relations.

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